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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/532,740	03/22/2000	Sukekazu Aratani	503.38382X00	8245

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EXAMINER

ABDULSELAM, ABBAS I

ART UNIT PAPER NUMBER

2674

DATE MAILED: 03/19/2003

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Please find below and/or attached an Office communication concerning this application or proceeding.

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Office Action Summary

Application No.

09/532,740

Applicant(s)

ARATANI ET AL.

Examiner

Abbas I Abduselam

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2674

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 23 May 2002.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-10 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-10 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____
- 4) ☐ Interview Summary (PTO-413) Paper No(s). _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

DETAILED ACTION

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1-10 are rejected under 35 U.S.C. 103 as being unpatentable over Hirai et al. (USPN 6122021) in view of Johnson et al. (USPN 6252638).

Regarding claims 1-2 and 6, Hirai teaches liquid crystal display apparatus in which a liquid display element is utilized. Hirai teaches that the apparatus includes light source (11), liquid crystal display element (12). See Fig 2. Hirai also discloses the use of active matrix liquid crystal display elements with multiple light sources of various types (col. 32, lines 11-20 & Fig 4'). Hirai teaches the liquid crystal display element (1) contains substrates (2, 5), a picture element electrode (3), an active element (4) and a liquid crystal solidified matrix composite material (7) interposed between the substrates (col. 24, lines 67-68, col. 25, lines 1-10 & Fig 1.). Hirai teaches the liquid crystal display element in a transparent state and the application of electric field in terms of the electrode-substrate configuration. (col. 7, lines 39-43, col. 16, lines 52-55, lines 64-67, col.17, lines 1-7). Furthermore, Hirai adds the use of active matrix substrate with respect to multiple active elements that are connected to each of the picture element electrodes (col. 6, lines 62-67). Hirai teaches the responding property of the display and establishes a relationship between the property at ON and OFF states of the display (col. 13, lines 59-67, col.14, lines 1-9). However, Hirai does not disclose a lighting device that includes

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plurality of light sources. Johnson on the other hand teaches a light device which includes a plurality of light sources. See column 16, lines 16-31. Johnson also teaches that by varying the voltage applied to the modulator (10), the color filter alter the amount of light. See column 8, lines 6-9 and Fig 1.

Therefore, it would have been obvious to one having skill in the art at the time the invention was made to modify Hirai's display system to include Johnson's lighting device with plurality of light sources. One would have been motivated in view of the suggestion in Johnson that a lighting device is equivalent to the desired lighting device. The use of a lighting device helps control color signals in display devices.

Regarding claim 3, Johnson teaches that the modulator passes light regardless of the voltage applied. See col. 7, lines 7-10 and Fig 1.

Regarding claim 4, Johnson teaches lighting devices in connection to light emitting diodes and a light source generating a beam of colored light. See col. 11, 31-43.

Regarding claim 5, Johnson teaches an indicator light array with output beams (C2, C3, C4). See col. 12, lines 45-55 and Fig 10.

Regarding claim 7, Johnson that multiple colored light sources are used to generate different colors of light. See col. 2, lines 44-51.

Regarding claims 8-9, Hirai teaches the display system driven in a 2-state display and the response associated in several levels of the display.

Regarding claim 10, Hirai teaches the active matrix liquid crystal element including dynamic display having a fine gradation.

Conclusion

2. The prior art made of record and not relied upon is considered to applicant's disclosure. The following arts are cited for further reference.

U.S. Pat. No. 5,856,686 to Watanabe et al.

U.S. Pat. No. 6,473,067 to Maeda

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3. Any inquiry concerning this communication or earlier communication from the examiner should be directed to **Abbas Abdulsalam** whose telephone number is **(703) 305-8591**. The examiner can normally be reached on Monday through Friday (9:00-5:30).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, **Richard Hjerpe**, can be reached at **(703) 305-4709**.

Any response to this action should be mailed to:

Commissioner of patents and Trademarks

Washington, D.C. 20231

or faxed to:

(703) 872-9314


Hand delivered responses should be brought to crustal park II, Crystal Drive, Arlington, VA, Sixth Floor (Receptionist).

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the Technology center 2600 customer Service office whose telephone number is (703) 306-0377.

Abbas Abdulsalam

Examiner

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RICHARD HJERPE
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2600